



The Renovator

A Pentagon Renovation Program Newsletter



Vol. 7, No. 2

Mar/Apr 2002

FIT TO WIN!

The Pentagon Physical Fitness & Readiness Facility

It is time for the Pentagon Athletic Club (PAC) to get in shape! This spring, the Pentagon Renovation Program will begin construction of the new Physical Fitness and Readiness Facility (PFRF), replacing the existing 58-year old PAC. Acting PFRF Project Manager, Bob Pizzano, says that the new facility is long overdue. Pizzano joined the PAC in 1974 and twenty-eight years later, the facility is beginning to show its age. The PAC has never undergone a major renovation since opening in 1945.

"Physically, it simply doesn't meet today's sports medicine standards or space requirements," says Pizzano.

Dennis Williams, PAC Program Manager, agrees. "We have new equipment but we don't have enough space to bring it in." Williams also cites the age of the facility as a constant challenge in terms of operations. "The cost, in terms of man-hours, to maintain this facility is extremely high and increases as the building gets older."

Dr. Manal Ezzat, Army Program Manager, echoes these sentiments. "From a facility standpoint, the building systems, like the HVAC are inefficient. A fitness facility



An artist's conceptual rendering of the indoor running track and basketball courts that will be included in the new Physical Fitness and Readiness Facility (PFRF).

needs to be in an environment that is healthy for its users."

Mark Gravalles, PFRF Design Manager, is confident that everyone will be extremely pleased with the finished product. "The PAC doesn't have enough space for new equipment, yet new equipment is necessary to bring us up to military base facility standards. When the new PFRF is completed, these concerns will be a thing of the past."

The PFRF will be built to accommodate the expected ten percent

increase in membership over the next two years. The PAC, a 78,000-square-foot facility, currently supports about 2,000 members per day. The new facility will be more than 50-percent larger, supporting up to 8,000 members per day. The new 120,000-square-foot facility will be located at basement level underneath and adjacent to the Pentagon's Mall Terrace.

The spacious fitness center will boast several new areas, including two multi-purpose rooms, one for badminton and volleyball courts, the other for aerobics and stationary bikes. There will also be courts for squash, handball and racquetball. An indoor running track will be an eagerly

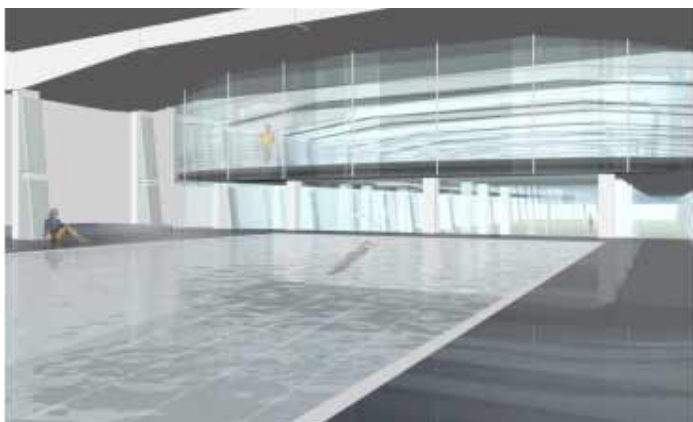
(continued next page)

Physical Fitness & Readiness Facility

(continued from page 1)



As demonstrated in the above photos, the current athletic facility no longer meets the needs of its membership and contains hazardous materials, such as asbestos and lead. Below, a conceptual rendering shows the new swimming pool with an indoor running track passing overhead.



anticipated addition to the new facility. Facility users will also have access to a new, 4,900-square-foot cardiovascular room with treadmills, stationary bikes, step machines and other state-of-the-art equipment. A speed bag workout area will also be added.

Many of the workout areas in the new facility will be much larger than the current PAC counterparts. This additional space will be a welcome change, according to Williams. "Right now, there are times when we have to take space away from training areas to accommodate new equipment."

The new basketball area will be 11,250 square feet, twice the area size of the existing courts in the PAC, with a full court and side-by-side practice courts. In addition to whirlpools and hot tubs, the new aquatic center will feature a six-lane, 9,700-square-foot pool, versus the 3,700-square-foot pool available to current PAC members. The PAC weight room is an area where members often wait in line for equipment and deal with crowded conditions during peak hours. The PFRF weight room will be twice as large (10,000 square feet) to provide space for additional equipment and users.

The PFRF design incorporates more than just space for workout equipment. A new juice bar, where users can purchase a variety of healthy refreshments, will replace the current food service in the PAC. "We wanted to move toward nutrition-oriented foods that were more in line with 'military readiness.' At the same time, having ready-made items like sandwiches and salads will be more low maintenance than the current grill," explains Ezzat. Other design enhancements include more provisions for female users. "The PFRF design is much more reflective of the increased number of women who work at the Pentagon. The PAC, for example, only has a steam room for men." The PFRF will also be fully compliant with the Americans with Disabilities Act.

New program space has also been figured into the PFRF design. A new auditorium, television studio and tech center will be a part of Phase 1 construction. In the second phase

of construction, the area adjacent to the main facility will be built-out to include a senior executive motor pool and mezzanine-level general office space.

Space limitations, physical wear and tear, aging building systems, and the need for a more flexible layout had been a concern of the army for several years. When funding for the \$19 million project was made available, the Pentagon Renovation Program was immediately brought in to manage its development. Due to the success of previous projects, the Pentagon Renovation Program will be using the design-build delivery method to complete work on the PFRF. Unlike the traditional design-bid-build model, design-build projects encourage maximum cooperation between construction and design teams for the duration of the project. Award fees for innovative, problem-solving building techniques are used as incentives for the contractor to complete the work on schedule and at or below cost. The design-build method was first used in completing the Remote Delivery Facility and has been implemented in all subsequent Pentagon Renovation projects including the Metro Entrance Facility and the Phoenix Project.

All of the workout areas will be completed during the first of two construction phases. Tenants whose offices face the Mall Terrace will notice some noise and dust being raised when the demolition for Phase 1 starts in late April 2002. Demolition will be completed in September 2002. Construction should be completed and the PFRF open to Pentagon personnel in December 2003. In April 2003, waterproofing of the underground facility will take place on the Mall Terrace Parking Lot. The waterproofing will be finished by July 2003. Phase 2 construction will be completed in December 2004.



The PFRF will be built in two phases underneath the Mall Terrace parking lot and in the hundred-foot zone between the parking lot and the Remote Delivery Facility.

A Leaner, "Greener" PFRF

As part of the design process, the architectural team and Pentagon Renovation Office are implementing sustainable features that will make the PFRF environmentally friendly, cost effective, energy efficient and easy to maintain. The following concepts are being planned for facility construction:

- **A landscaped "green roof," which prevents rainwater runoff and extends the life of the roof.**
- **Bamboo flooring in various parts of the facility. Bamboo is a rapidly renewable material.**
- **Floor mats, restroom partitions and up-holstery made from recycled materials.**
- **Pool water treated with an ozone system that reduces chlorine usage. This creates a healthier swimming environment and lowers maintenance costs by reducing the amount of energy spent on ventilation.**

- **Phase 1 Demolition:**
May 2002 - September 2002
- **Phase 1 Construction (Includes all workout areas) Complete:**
December 2003
- **Waterproofing of Phase 1 Mall Terrace Parking:**
April 2003 - July 2003
- **Phase 2 Construction Complete:**
December 2004

LESSONS LEARNED

Security and safety improvements resulting from September 11.

Hundreds of people pass through the apex of Wedge 1 everyday. At lunchtime, the corridors are bustling with hungry Pentagon personnel en route to the new Wedge 1 cafeteria or taking advantage of the new passenger elevators and escalators in Wedge 1. Daily activities and routines have resumed in an area not long ago plagued by physical damage from the terrorist attack. Just a few months ago, the now clean and efficient offices and corridors were covered in soot and toxic mold due to the acrid smoke created by burning jet fuel and thousands of gallons of water dumped by the sprinklers. Ninety-percent of the furniture and computers had to be replaced. The escalators and elevators needed significant repair.



A task force was formed immediately after September 11 to devise ways to improve current force protection initiatives at the Pentagon



A worker builds a reinforced Concrete Masonry Unit (CMU) wall in the Phoenix Project. The CMU walls will be constructed around stairwells, corridors, elevator shafts and critical system rooms throughout the Pentagon to provide additional strength.

Wedge 1, the area first penetrated by Flight 77, was the first-fifth of above-ground space in the Pentagon to undergo renovation and the only section of the building to have blast-resistant windows and a sprinkler system, two factors that aided in saving lives.

Several investigations since the terrorist attack have examined building performance on September 11 in both the renovated and unrenovated portion of the Pentagon. The U.S. Army Corps of Engineers conducted a structural analysis that determined ways to even further improve fire response and life safety features in the Pentagon.

Similarly, the “Building Performance Evaluation Task Force,” made up of personnel from the Pentagon Building Management Office and Federal Facilities Division, industry experts and rescue and fire technicians solicited input from people that were near the impacted area. Survivors were asked to share their experiences on September 11 and provide suggestions on how emergency egress may be facilitated in the future. The information from the interviews was consolidated into 26 recommendations, primarily fire-related, that will be integrated into the performance specification requirements of future Pentagon Renovation contracts. The Pentagon Force Protection Project Action Team (PFPPAT) is reviewing lessons learned and formulating ways to enhance the Pentagon’s force pro

tection. The Renovation Program plans to take advantage of the opportunity to exceed current building codes, especially in terms of fire and life safety protection. Currently, the unrenovated Pentagon does not comply with any modern building codes.

According to first-hand testimony, after Flight 77 blasted into the Pentagon with 10,000 gallons of jet fuel, primary power was significantly impeded and smoke limited visibility to less than one-foot. The brightly-lit exit signs, six-feet overhead, proved ineffective. During fire events, it is typical for victims to crawl their way to safety to prevent smoke inhalation. As part of the Renovation Program, photo-luminescent signs will be installed at floor level, along baseboards and furniture or directly onto the floor. When exposed to light for 15-minutes, the strips glow for approximately four hours and do not require electricity to function.

New automated smoke doors, installed in Wedge 1, operated according to plan. Inconspicuous when retracted, the doors deploy from side closets the event of a fire to prevent smoke from circulating through the building. With a tap of a waist-high handle they retract wide enough for a wheel chair to pass through safely before reclosing. However, Pentagon tenants occupying Wedge 1 had recently moved into the new offices and some were unfamiliar with the operation of the smoke doors. When confronted with the unexpected barrier, some tenants became disoriented. The Renovation Program is studying alternatives to provide more traditional doors to prevent confusion in an emergency situation.

“People get too comfortable. You never realize the value of regular equipment inspection and evacuation drills until a tragic event happens to your building,” explains Ken Catlow, Operations Group Leader of the Pentagon Renovation Program, and lead member of the PFPPAT.

(continued next page.)



Phoenix Project workers install a new stand pipe to enhance fire protection in the Pentagon.



Workers studied the automated smoke doors shortly after 9/11 to determine how they could be adjusted for better performance.

Lessons Learned from September 11

(continued from page 5)



“There is no such thing as a blast or fire-proof facility. It can’t be built. What you can do is take reasonable and prudent measures to ensure our personnel are safe...”

*-Lee Evey, Program Manager,
Pentagon Renovation Program*

Too often, emergency plans are developed and then shelved until an emergency occurs. As a result, they become outdated as tenants change and building plans are altered. As part of its recommendation, the PFPPAT suggested the Pentagon train additional area fire wardens and provide access to better equipment. Operating under the existing emergency fire protection plan, these wardens will be responsible for ensuring designated personnel, including individuals with disabilities, escape safely and are accounted for during an evacuation.

The Public Address (PA) System on September 11 was inaudible in many areas of the unrenovated Pentagon. Already installed in Wedge 1, the Renovation Program is looking into the possibility of installing a stand-alone PA system within every room in the Pentagon.

Long-term, the Pentagon Renovation Program will harden all radial corridors with Concrete Masonry Units (CMUs) and make them better resistant to fire with one-hour fire-rated wall board. New corridors will be built, traversing all five rings to create additional avenues of egress.

Although thousands escaped the Pentagon unharmed despite their proximity to the point of impact, the Renovation Program is working to facilitate emergency egress from the Pentagon. The Renovation Program is conducting a time egress analysis to determine emergency egress capabilities while also studying methods of removing non-operable windows during emergency situations. Improvements will be made to handicapped access and egress as renovation continues.

According to Lee Evey, Pentagon Renovation Program Manager these improvements will create a safer and stronger Pentagon. “There is no such thing as a blast or fire-proof facility. It can’t be built. What you can do is take reasonable and prudent measures to ensure our personnel are safe,” Evey states.



An example of the type of photo-luminescent strips that will be used to mark egress paths in the event of fire emergencies or power outages at the Pentagon.



SAFETY SAVES TIME, MONEY & LIVES

The Pentagon Renovation Program is extremely proud of its safety program. With over one million man-hours worked on the Phoenix Project, there have been only two lost time accidents, both minor hand injuries. That is an incredible statistic considering the large number of people working in such a confined space. With steel being swung overhead by cranes and large trucks and machinery operating on the ground, workers must remain focused on their job and alert to their surroundings at all times.

Despite the best efforts of the contractors, workers on the construction sites and the Pentagon Renovation Safety Team, accidents do happen. On March 28, 2002, a steel truss fell from a forklift and injured a construction worker on the Metro Entrance Facility Project. The worker later died as a result of the injuries sustained from the accident.



Safety meetings are held on the construction sites on a regular basis. Safety awards and incentives encourage workers to heed safety requirements.

WEDGE 1 CAFETERIA A SUCCESS

On March 11, the new Wedge 1 cafeteria officially opened to the delight of Pentagon tenants and visitors. The cafeteria, on the second floor between Corridors 3 and 4, was built in the lightwell over A-E drive between the B and C-rings. This allowed for the addition of skylights for the first time in the Pentagon. This also marks the first time that Pentagon tenants can enjoy the food of popular commercial vendors, such as Subway and Kentucky Fried Chicken, without leaving the Pentagon.



On September 11, the new cafeteria space in Wedge 1 was a just days away from being turned over to NEXCOM to build-out for the private food vendors. After the attack, the cafeteria served as a visible dividing line between the areas severely damaged by the blast and the areas suffering water and smoke damage (left). The blast traveled down Corridor 4, shattering the double glass doors leading into the cafeteria (below). With all signs of the attack recovered, the Wedge 1 cafeteria opened in March (above). Pentagon tenants are consistently drawn to the new skylights and popular commercial vendors.



The Phoenix Project - Six Months After 9/11

In the days leading up to March 11, 2002, the six-month anniversary of the attack on the Pentagon, the Phoenix Project site received a great deal of attention. Public officials and media came to witness the progress of the job and congratulate the workers who have dedicated themselves to beating the September 11, 2002 deadline.

On March 7, Pentagon Renovation Program Manager, Lee Evey, gave a well-attended six-month progress report in the Pentagon Briefing Room. The following day, over 120 members representing 60 different media outlets visited the Phoenix Project to take pictures and conduct interviews with renovation representatives and construction workers. On March 11, Secretary of Defense Donald Rumsfeld visited the site to personally congratulate the workers on their tremendous progress.

“Six-Month Activities” concluded in Wedge 1, as Congressman Mark Foley led a congressional contingent to the Pentagon on March 21, 2002 to present a commendation to members of the Renovation Program. Actress Bo Derek participated in the event, adding her personal thanks by signing autographs and posing for photos with the workers. Program Manager Lee Evey accepted the commendation on behalf of the Program, saying “This is for you, the workers who put in 24-hour days to rebuild this building.”



Above, Congressman Mark Foley holds the Congressional Commendation, which, in part, states: “...the House of Representatives commends the great work that the Pentagon Renovation Program and its contractors have completed thus far, in reconstructing the portion of the Pentagon that was destroyed by the terrorist attack of September 11, 2001.”



Secretary of Defense Donald Rumsfeld thanks Phoenix Project workers for their efforts on the six-month anniversary of the attack.



The Phoenix Project buzzed with media activity on March 8, as news crews nationwide came to provide the public with information on the job's progress.

More Photos from Six Months After 9/11



Wedge 1 Team Leader, Dave Gabel, discusses the recovery effort with a local news reporter on March 8.



Congressman Jim Moran (VA) and Carlos Lizama-Morales of Facchina Construction Company at the Congressional Commendation Ceremony on March 21.



PENTAGON RENOVATION PROGRAM "Project Watch"



The Phoenix Project

Structural concrete work on all five floors and the roof was completed on April 6, 2002. The core and shell construction is continuing with the installation of duct work and utilities.

Wedge 1 Recovery

Of the 4,600 tenants displaced, over 1,500 have been moved back into their Wedge 1 offices.

Wedges 2-5

Demolition in Wedge 2 is 80% complete. Workers will begin installing HVAC, electrical and plumbing components soon.



Metro Entrance Facility

The steel structure for the new entrance facility is being erected. The project is on target for November 2002 completion.

Actress Bo Derek, pictured with Wedge 1 team member, Richard Jubin, posed for pictures with Pentagon Renovation personnel and construction workers during the March 21 Congressional Ceremony.

An Introduction to “The Renovators”

The Pentagon Renovation Program, referred to internally as “PenRen,” is an operation that relies heavily on teamwork for its success. Of the 350 core staff members, PenRen is comprised of approximately 15 percent government and 85 percent contractor personnel. The people challenged with renovating the nation’s military headquarters are some of the best and brightest in their respective fields, including acquisition and contracting, architecture and engineering, construction management, health and occupational safety, information management and telecommunications, scheduling, relocation planning, management and logistics and resource management. In addition, PenRen considers all of the stakeholders part of its essential team, including the Pentagon Building Management Office, Federal Facilities Division, Defense Protective Service, Arlington County, various historical commissions, and several local advisory agencies to ensure that the renovated Pentagon will be completed “*On Cost, On Schedule, and Built for the Next 50 Years.*”

In this regularly scheduled column you will find stories of the individuals who keep the Renovation Program on track. In this issue we feature the team players responsible for the success of the Pentagon Renovation Program.



**John Butler,
Relocation
Planning & Coordination Team
Leader, BISI**

John Butler is in charge of one of the more daunting tasks of renovating the Pentagon - coordinating and accomplishing over 30,000 tenant moves over the course of the Program. Butler relishes the unique challenges of the job. “The Renovation Program magnifies every aspect of a tenant relocation to the point that every move is a stand alone project,” Butler says.

Butler joined PenRen in 1996 with a strong relocation management background gained from experience with GSA and NASA relocation projects.

Butler joined PenRen in 1996 with a strong relocation management background gained from experience with GSA and NASA relocation projects.

In July 2001, he became CEO of Butler Innovative Solutions, Inc. (BISI), a company in a mentor-protegee relationship with Daniel, Mann, Johnson & Mendenhall (DMJM), one of the architecture and engineering firms responsible for construction management on the Renovation Program.



**Toya Henry-Sykes,
Deputy Team
Leader, Logistics,
Relocation Planning Team, BISI**

Toya Henry-Sykes has been with the Renovation Program for more

than eight years. She started in document control, now known as the Information Resource Center, responsible for the reproduction of CADD drawings and floorplans and the organization of other documents. Henry-Sykes is now responsible for the logistics of tenant moves during the renovation of the Pentagon.

Her direct dealings with the tenants made the September 11 attack very personal. “I was directly involved with moving people to the area that was hit,” remembers Henry-Sykes. “I remember going to the [Pentagon’s] courtyard after 9/11 and the sense of relief I felt when I would see tenants who had survived the attack.”

Henry-Sykes takes pride in her team, her tenure at the Program and in having been a part of the renovation of the Pentagon from the very beginning.



**Bob Pizzano,
Physical Fitness &
Readiness Facility
(PFRF) Acting Team
Leader, 3D/International**

Bob Pizzano brings years of valuable construction and project management experience to the PFRF team. After retiring from the Navy in 1992, Pizzano worked as a con

struction consultant for a variety of civilian clients. Just prior to joining the Renovation Program in July 2001, he was the Northeast Region VP for Eastern Maintenance and Services, overseeing military housing maintenance and repairs for the Navy. Pizzano says the sense of patriotism, innovative processes and the magnitude of the job attracted him to the Program, but the people stand out the most. "The Renovation Program is made up of darn good people doing a whale of a job and it's fun to be associated with it," Pizzano says.



**Flo Meyers,
Safety & Occupational
Health Team Leader,
Pentagon Renovation
Program**

Flo Meyers came to the Pentagon Renovation Program in 1997, with 15 years of experience in Safety and Occupational Health. Before taking responsi-

bility for the safety of all PenRen construction sites, Meyers worked as a safety officer for the Army Corps of Engineers. "I was basically living out of a suitcase for 15 years before coming to PenRen," Meyers recalls of her assignments in the Middle East, Africa, and Europe. "This is the first time I've had a job where I didn't travel 80-percent of the time."

Meyers gives credit to the entire PenRen team for the Program's outstanding record of safety on its various projects. "Everyone here takes an active interest in safety," she says, "At other jobs, I was viewed as the 'bad guy' that nobody wanted to deal with. But here, I actually get phone calls from staff to ask me about safety issues." Meyers says that the healthy "safety first" attitude makes her job much easier to do. "Safety is not a glamorous job, but it's accepted and respected as a way of life around here."

**PLEASE SEND QUESTIONS,
COMMENTS, CONCERNS, KUDOS
AND COMPLAINTS TO
RENOVATION@ARMY.PENTAGON.MIL**

Frequently Asked Questions:

Q: When can Metro users expect an end to the long walk around the construction site into the Pentagon?

A: A direct path from the upper bus platform to the Pentagon will be finished by June 2002. The new Metro Entrance Facility should be completed by November 2002.

Q: How far ahead of schedule is construction on the Phoenix Project?

A: We are currently about 4 weeks ahead of schedule towards meeting the Program goal of having the E-ring offices reoccupied by September 11, 2002. While project managers can't predict future weather conditions and other elements that affect construction schedules, work continues around the clock.

Q: What is "design-build?"

A: Design-build is a construction contracting approach adopted by the Pentagon Renovation Program that allows design and construction to operate as a single entity under one contract. This is in contrast to the standard government contracting approach of design-bid-build which often results in conflict between the designer, construction contractor and the owner.



PHOENIX RISING!

On April 5, 2002, a “Topping Out” Ceremony was held to celebrate the completion of the structural concrete work on the Phoenix Project. While workers completed the final concrete pour on the roof, their co-workers celebrated a few floors below to the sounds of the Marine Corps band, “Free Country.” Secretary of Defense Donald Rumsfeld and Deputy Secretary Paul Wolfowitz attended the celebration to congratulate the construction crews and the fire and rescue workers who were invited back to the Pentagon to see the incredible progress.



Above: The structural concrete work is complete on all five floors and the roof. The new Indiana limestone is rising up the face of the Pentagon. More than one-third of the 4,000 slabs of stone have been installed on the building's facade. The countdown clock reminds workers, that despite being approximately four weeks ahead of schedule, they are still racing against time to meet the September 11 goal of reoccupying the E-ring offices at the point of impact.

Left: Secretary of Defense Donald Rumsfeld attended the “Topping Out” Ceremony on April 5, 2002. After thanking the construction workers for their incredible effort the Secretary and Deputy Secretary, Paul Wolfowitz, stayed to pose for pictures and autographed hard hats.

Below: One of the final concrete pours taking place on the roof of the Phoenix Project.



Pentagon Renovation Program

*On Cost, On Schedule,
Built for the Next 50 Years*

(703) 697.HELP (4357),

<http://renovation.pentagon.mil>

Pentagon Renovation Program Office
100 Boundary Channel Drive
Arlington, VA 22202

The Renovator is an authorized publication for members of the Department of Defense. Contents of *The Renovator* are not necessarily the official views of, or endorsed by, the U.S. Government, the Department of Defense, or the Pentagon Renovation Program. Material from this publication may be reproduced without permission.

Pentagon Renovation Program Manager _ _ _ _ _ Lee Evey
Deputy Program Manager _ _ _ _ _ Mike Sullivan
Program Mgmt. & Support Svcs. Group Leader _ _ Sandra Dutson
Information & Communications Team Leader _ _ Brett Eaton
Communications Specialist _ _ _ _ _ Rachel Decker
Communications Specialist _ _ _ _ _ George Jackson
Web site and Graphics Specialist _ _ _ _ _ Bill Hopper

**PLEASE VISIT OUR WEB SITE FOR THE
FULL STORY AND MORE PHOTOS FROM
THE “TOPPING OUT” CEREMONY.
[HTTP://RENOVATION.PENTAGON.MIL](http://renovation.pentagon.mil)**